



# THE RISE OF CRYPTOCURRENCIES AND THEIR POTENTIAL TO DISRUPT TRADITIONAL FINANCIAL SYSTEMS

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## ABSTRACT

This research investigates the impacts of cryptocurrencies on traditional financial systems and how their introduction has influenced modern financial policies. The paper employs a qualitative analysis of published research, including historical cryptocurrency data, macroeconomic policy data, and the inflationary and deflationary effects of cryptocurrencies. Additionally, it examines the impacts on central banking policies, user experiences, and overall cash flow within the economy. The findings provide a comprehensive overview and deeper understanding of how cryptocurrencies are reshaping contemporary financial systems.

**KEYWORDS:** Cryptocurrencies, Inflation, Financial Systems, Blockchain, Decentralization, Regulation.

**THESIS:** The rise of cryptocurrencies has had an adverse impact on our current economic structures and the methods in which our economies work.

## INTRODUCTION

Cryptocurrencies have been on the rise in recent years and have slowly permeated into traditional financial systems. They originated from an anonymous, untraceable currency system proposed by Chaum (1983); considered the earliest digital currency theory. Cryptocurrencies are only accessible in an electronic format and are a type of digital currency that allows people to make payments to each other online. In contrast to national currencies, cryptocurrencies have no legislated fixed value - their value fluctuates based on multiple variables. For example, the price of bitcoin increased from about “30,000 USD in mid-2021 to almost 70,000 USD towards the end of 2021 before falling to 35,000 USD in early 2022.” Their rivals, Ether, have also gone through the same trend. Some cryptocurrencies, like bitcoin, have very high inflation rates due to their scarcity, as there will only be 21 million in existence. These high inflation rates make cryptocurrencies a risky investment for a lot of consumers. The main innovation lies in its peer-to-peer payment system, which is independent of financial institutions. Secondly, the rules governing its supply are mechanical, which is often met with arguments to regulate it using the inflation policy of central banks.

Cryptocurrencies’ boom in the global market has impacted the shift of various existing government policies, like international and monetary policies used in the central banking systems. The cross-border transactions related to cryptocurrencies have sparked a debate about how these transactions could pose a major financial risk and how they could spawn scams and cases of money laundering. Cryptocurrencies’ use provides users with a quick and efficient landscape for transactions. However, the uncertainty it proves to place has been a topic of global debate.

Likewise, it is important to discuss the potential implications of cryptocurrencies in global economics, as they could prove to be a deciding factor for future investments. They can potentially reshape the structure of the economy, and affect various existing policies. Thus, it is important to explore the potential scale of impact cryptocurrencies can pose to ascertain the potential developments and negative impacts they can cause. This research paper aims to investigate and discuss the potential impacts that cryptocurrencies have had on traditional financial systems and how the introduction of these independent blockchain-based systems has led to major concerns about the advancements of the modern economies of various developed nations.

## LITERATURE REVIEW

### Global Policies and Challenges

Cryptocurrencies have slowly entered traditional financial systems but have faced various challenges with the traditional policies in place. This is highlighted by a paper written by Jonathan Chiu and Thorsten Koepll (2018) in which they explore how cryptocurrencies’ volatility in the market reduces “investor confidence”, and how the high volatility and changing rates of cryptocurrencies make them a risky source to invest in. The paper also discusses how they go against the standard conventions of banking and how their decentralization challenges monetary policy tools like interest rate adjustments and open market operations. Cryptocurrencies also have many regulatory challenges; according to Sukomardojo et al. (2023), cryptocurrencies could expand into a wide network if they are not regulated. However, their growth could lead to a stalemate if the government regulations are too strict. The paper also sheds light on how cryptocurrencies could be a potential cross-border payment system. However, they also point out how international policies could be ineffective in stopping money laundering and how cross-border transactions could lead to other illegal activities. They also stated how cryptocurrencies can affect inflation: “For example, if cryptocurrency prices suddenly

spike, people may be more inclined to save them rather than spend them." According to the study, cryptocurrencies could be used as a mode of payment and lead to a spike in the price of goods and services. If cryptocurrencies experience deflation, the economy could also experience deflation."

Another study led by Talis J. Putnins and Jonathan P. K. Wong (2020) discusses efforts by the government, like "anti-money laundering and KYC regulations," which were a step forward towards containing the drawbacks presented by cryptocurrencies as these measures discourage money laundering and illegal activities. They reviewed previous case studies and real-world examples to show the impacts cryptocurrencies can have on various financial sectors in different ways. Cryptocurrencies can also be a huge risk to consumers because of the technology in place. A study by Philipp Hacker and Chris Thomale (2019) revealed that cases of scammers, fraud, and violations of consumer protection were common in the unregulated application of cryptocurrency systems, how there were cases of taxation complexities in transactions, and how it was difficult to ensure transparent market integrity.

#### **Advantages of crypto as a decentralized system**

A decentralized system helps users create private accounts for transactions; it can serve as an added asset to many of the users investing money. The book by authors Don Tapscott and Alex Tapscott (2016) points out that cryptocurrencies are added assets outside traditional financial norms and can effectively help an individual benefit from investments. It points out how the personalization of cryptocurrency systems can increase the speed of transactions and how, by reducing intermediaries, they can reduce transaction fees. It also discusses how they can make cryptocurrencies a valuable resource for cross-border transactions. According to the study, users enjoy the benefits of a decentralized system as it reduces the control of central bank systems and government regulations. Cryptocurrencies serve to provide users with a more efficient, quicker, and more profitable transaction service. This attracts users to cryptocurrencies, which has led to a boom in the newer crypto-financial world, which separates itself from the traditional financial system.

#### **METHODOLOGY**

This study employs a qualitative analysis of previously published research, including historical cryptocurrency data, macroeconomic policy data, and the inflationary and deflationary aspects of cryptocurrencies. The analysis also considers the various security risks cryptocurrencies pose to the financial market and financial stability. While external factors, such as currency fluctuations, may limit the method, a qualitative approach was deemed most suitable for this research paper. This approach allows for a comprehensive understanding of the impacts of cryptocurrencies on traditional financial systems and policies.

#### **RESULTS & DISCUSSION**

To analyze the impact of cryptocurrencies on the financial system, it is important to address important factors like its decentralized systems, high volatility rates, cross-border exchange rates, and the government's mitigation policies.

Firstly, cryptocurrencies' decentralized systems provide their investors with a faster transaction system compared to their wire transfer counterparts; this helps a user transfer their funds to another user without any interruption more efficiently and quickly. The technology is also widely used in transferring money internationally; its ledger technology can help bring people into a more formal financial fold.

Secondly, the high volatility and limited supply of cryptocurrencies can significantly impact an economy's inflation rate. Due to their scarce availability, only a limited number of units exist in the market. If the supply does not increase rapidly and the value of cryptocurrency remains low, people are inclined to store their funds in digital wallets, leading to deflation and reducing its popularity as a daily payment method, as people anticipate a future increase in value. Conversely, if the price of cryptocurrency rises along with its supply, it will become more inflationary, prompting people to spend it quickly rather than hold onto it. This creates uncertainty in the financial market, where the value of investors' wealth can change dramatically overnight.

Thirdly, cryptocurrencies have shown a great contribution to international transactions. They make cross-border transfers fairly easy and cheap as they do not require intermediaries, like banks. The quickness of, and cheaper transactions in, cross-border payments can also offer individuals opportunities to start a business abroad. Furthermore, this may impact payment systems, other financial institutions, and various business models. However, these cross-border transactions are susceptible to money laundering and other illegal activities, which has motivated the government to take action to mitigate the risk. Actions like taxation on cryptocurrencies, strict bans & restrictions, international treaties like FAFT, and a counter-money-laundering approach provide consumers with added safety while allowing higher security and regulation over the cryptocurrency market.

However, while strict regulations may enhance security, they can hinder the overall growth of the cryptocurrency market. These regulations can negatively impact the macroeconomic stability of the economy and slow down sector growth, as cryptocurrencies require a free system to operate efficiently. Although the crypto market is fast-paced, its security risks make it a risky investment. Rigid regulations on cryptocurrencies can be counterproductive, as they need a decentralized system to fully realize their potential.

#### **CONCLUSION**

Cryptocurrencies have significantly impacted traditional financial systems. They have made transactions easier, quicker, and cheaper for investors. However, they are also susceptible to security risks such as money laundering, scams, and other illegal activities, especially in cross-border transactions or personal investments. Additionally, the high volatility of cryptocurrencies has influenced inflationary and deflationary rates by altering income flows within the economy, making them a risky investment due to their fluctuating value. Attempts

to mitigate these issues through strict regulations and policies have hindered the growth of cryptocurrencies, as they rely on a decentralized system that operates independently of traditional central banking systems.

## REFERENCES

1. Grant, Mitchell. "Digital Money: What It Is, How It Works, Types, and Examples." Investopedia, Investopedia, 15 Mar. 2024, [www.investopedia.com/terms/d/digital-money.asp](http://www.investopedia.com/terms/d/digital-money.asp).
2. Sharma, Dewangi. "The Rise of Digital Currencies: Opportunities for Economies." Investment Promotion and Facilitation Agency, 16 Apr. 2024, [www.investindia.gov.in/team-india-blogs/rise-digital-currencies-opportunities-economies#:~:text=Digital%20currencies%20typically%20come%20with,a%20range%20of%20diverse%20options](http://www.investindia.gov.in/team-india-blogs/rise-digital-currencies-opportunities-economies#:~:text=Digital%20currencies%20typically%20come%20with,a%20range%20of%20diverse%20options).
3. Sukomardojo, Tekat, et al. Cryptocurrency and Macro-Economic Stability: Impacts and Regulations, 8 Oct. 2023, [www.researchgate.net/publication/374562347\\_Cryptocurrency\\_and\\_Macro-Economic\\_Stability\\_Impacts\\_and\\_Regulations](http://www.researchgate.net/publication/374562347_Cryptocurrency_and_Macro-Economic_Stability_Impacts_and_Regulations).
4. Website, Investopedia. "Cryptocurrency Explained with Pros and Cons for Investment." Investopedia, Investopedia, 31 May 2023, [www.investopedia.com/terms/c/cryptocurrency.asp](http://www.investopedia.com/terms/c/cryptocurrency.asp).
5. Yue, Yao, et al. "How Cryptocurrency Affects Economy? A Network Analysis Using Bibliometric Methods." International Review of Financial Analysis, North-Holland, 19 Aug. 2021, [www.sciencedirect.com/science/article/abs/pii/S1057521921001976](http://www.sciencedirect.com/science/article/abs/pii/S1057521921001976).
6. Rodeck, David. "Digital Currency: The Future of Your Money." Edited by Michael Adams, Forbes, Forbes Magazine, 10 Jan. 2024, [www.forbes.com/advisor/in/investing/cryptocurrency/digital-currency/](http://www.forbes.com/advisor/in/investing/cryptocurrency/digital-currency/).
7. White, Kathryn, et al. "The Macroeconomic Impact of Cryptocurrency and Stablecoins." The Macroeconomic Impact of Cryptocurrency and Stablecoins, July 2022, [www3.weforum.org/docs/WEF\\_The\\_Macroeconomic\\_Impact\\_of\\_Cryptocurrency\\_and\\_Stablecoins\\_2022.pdf](http://www3.weforum.org/docs/WEF_The_Macroeconomic_Impact_of_Cryptocurrency_and_Stablecoins_2022.pdf).
8. Yakes, Eric. "Monetary Properties of Bitcoin - Bitcoin Magazine - Bitcoin News, Articles and Expert Insights." THE MONETARY PROPERTIES OF BITCOIN, 25 June 2021, [bitcoinmagazine.com/culture/monetary-properties-of-bitcoin](http://bitcoinmagazine.com/culture/monetary-properties-of-bitcoin).
9. RBA. "Digital Currencies: Explainer: Education." Reserve Bank of Australia, scheme=AGLSTERMS.AglAgent; corporateName=Reserve Bank of Australia, 4 May 2023, [www.rba.gov.au/education/resources/explainers/cryptocurrencies.html#:~:text=Cryptocurrencies%20are%20digital%20tokens,for%20them%20in%20the%20market](http://www.rba.gov.au/education/resources/explainers/cryptocurrencies.html#:~:text=Cryptocurrencies%20are%20digital%20tokens,for%20them%20in%20the%20market).
10. Karau, Sören. "Monetary Policy and Bitcoin." Journal of International Money and Finance, Pergamon, 17 June 2023, [www.sciencedirect.com/science/article/abs/pii/S0261560623000815#:~:text=The%20impact%20of%20monetary%20policy,economies%20subject%20to%20capital%20controls](http://www.sciencedirect.com/science/article/abs/pii/S0261560623000815#:~:text=The%20impact%20of%20monetary%20policy,economies%20subject%20to%20capital%20controls).
11. He, Dong. "Central Bank Monetary Policy in the Age of Cryptocurrencies - IMF F&D Magazine - June 2018: Volume 55: Number 2." IMF, 1 June 2018, [www.imf.org/en/Publications/fandd/issues/2018/06/central-bank-monetary-policy-and-cryptocurrencies-he](http://www.imf.org/en/Publications/fandd/issues/2018/06/central-bank-monetary-policy-and-cryptocurrencies-he).
12. Pfister, Christian. "Monetary Policy and Digital Currencies: Much Ado About ..." Monetary Policy and Digital Currencies: Much Ado about Nothing?, 17 Sept. 2017, [publications.banque-france.fr/sites/default/files/medias/documents/dt-642.pdf](http://publications.banque-france.fr/sites/default/files/medias/documents/dt-642.pdf).
13. Chiu, Jonathan, and Thorsten V. Koepp. "The Economics of Cryptocurrencies – Bitcoin and Beyond\*." The Economics of Cryptocurrencies – Bitcoin and Beyond, Sept. 2018, [www.bis.org/events/eopix\\_1810/chiu\\_paper.pdf](http://www.bis.org/events/eopix_1810/chiu_paper.pdf).
14. Hacker, Phillip, et al. "(PDF) Regulating Blockchain: Techno-Social and Legal Challenges—an Introduction." Regulating Blockchain: Techno-Social and Legal Challenges—An Introduction, June 2019, [www.researchgate.net/publication/335296079\\_Regulating\\_Blockchain\\_Techno-Social\\_and\\_Legal\\_Challenges-An\\_Introduction](http://www.researchgate.net/publication/335296079_Regulating_Blockchain_Techno-Social_and_Legal_Challenges-An_Introduction).
15. Tapscott, Alex, and Don Tapscott. Summary Blockchain Revolution: How the Technology behind Bitcoin and Other Cryptocurrencies Is Changing the World by Don Tapscott and Alex Tapscott. Edition Shortcut (Author). Distributed via Smashwords, 2016.
16. Crawford, Jesse, and Yong Guan. Knowing Your Bitcoin Customer: Money Laundering in the Bitcoin Economy, May 2020, [www.researchgate.net/publication/342756016\\_Knowing\\_your\\_Bitcoin\\_Customer\\_Money\\_Laundering\\_in\\_the\\_Bitcoin\\_Economy](http://www.researchgate.net/publication/342756016_Knowing_your_Bitcoin_Customer_Money_Laundering_in_the_Bitcoin_Economy).